

02-AUG-2002 11:00 FROM A J PARK  
Search Title: 00/1795 ipc+kws User: cpagns - Soosa Gnanasingham, s3/80  
PAN: 57-522573, Page 1 of 2, Wed Aug 30 22:32:53, VIEWED MARKED

TO 0013127048023

P.03/19

\*MATJ

X25 X27

97-522573/48

\*JP 09250449-A

Vibration type compressor in refrigerator - has control device which controls inverter circuit to increase or decrease output voltage according to composed top dead point position

MATSUSI II TA REIKI KK 96.03.14 96JP-057496  
Q56 (97.09.22) F04B 17/04, 39/08, 49/06

The compressor (10) is provided with a displacement detector (21) connected to a piston (14) in the axial direction of a cylinder (11). The cylinder is provided with an intake valve (15) and a discharge valve (16). A permanent magnet (12) is arranged in the inner peripheral surface of the cylinder. A coil (13) which acts on the magnet is connected with the piston and moves along with the piston in the axial direction of the cylinder. A coupled of resonating openings (20) are coupled with the piston. A converter circuit (23) converts the AC electric power into the DC electric power. An inverter circuit (25) consisting of a number of switching transistors converts the DC electric power into the AC electric power and applies the voltage to the coil.

A top dead point position calculator (28) calculates the top dead point position of the piston from the piston position signal from the displacement detector. A top dead point position comparison device (29) is provided which outputs the comparison signal according to the difference of the detected top dead point position with the predetermined reference value of the top dead point position.

A control device (A) increases the output voltage of the inverter circuit more than the preset standard voltage output, when the detected position of the dead point is below the reference position and decreases the output voltage below the preset standard voltage out when detected position of the top dead point is above the reference position.

ADVANTAGE - Prevents damage to valve by over stroke of piston. Improves cooling performance of refrigerator. (14pp Dwg.No.1/13)  
N97-435246

X25-L03B X27-F02C1

02-AUG-2002 11:00 FROM A J PA

TO 0013127048023

P.04/19

Search Title: 00/1795 ipc+kws User: cpagns - Soosa Gnanasingham, s3/80  
PMN 97-522573, Page 2 of 2, Wed Aug 30 12:33:00, VIEWED MARKED

- 10 振動型圧縮機
- 11 シリンダ
- 12 永久磁石
- 13 環状コイル
- 14 ピストン
- 15 吸入弁
- 16 吐出弁
- 20 共振バネ
- 21 変位検知器

